5 FAM 640
QUALITY ASSURANCE (QA)

(TL:IM-29; 02-04-2000)

5 FAM 641 THE QUALITY ASSURANCE DISCIPLINE

(TL:IM-29; 02-04-2000)

a. Quality is the degree to which a system, component, or process meets user/customer needs and best business practices or expectation. The QA discipline ensures that systems are technically sound and well documented.

b. Project managers must develop, define, and incorporate quality assurance (QA) procedures into the project regardless of the method used.

c. The QA discipline helps to meet the following system objectives:

(1) Project manager's appointment of a quality assurance manager and approval of quality assurance plan;

(2) Conduct and document QA reviews and evaluations;

(3) Follow agreed upon guidelines to produce quality products using comprehensive checklists (as appropriate) throughout the system life cycle;

(4) Approve and accept a system; and

(5) Conduct periodic reviews of the operational system.

5 FAM 642 QUALITY ASSURANCE PLAN

(TL:IM-29; 02-04-2000)

a. A quality assurance (QA) plan must be developed for every project.

b. QA plans may be tailored to individual projects and are created to parallel the project plan.

c. QA plans must be reviewed and updated each time the project plan is updated to ensure consistency and compatibility for proposed QA activities.

5 FAM 643 REVIEWS AND EVALUATIONS

(TL:IM-29; 02-04-2000)

a. Project managers must ensure that periodic reviews and evaluations are conducted throughout the project's life cycle and in accordance with the quality assurance plan (produced at project initiation).

b. The following QA reviews must be conducted for evaluating system reliability:

(1) Functional Requirements Specification (FRS)—performed following the requirements analysis stage and specifies both functional and non-functional requirements; determines how the system functions (i.e., reliability and capacity);

(2) Preliminary Design Review (PDR)—performed following preliminary design phase and ensures that system's architectural design can be traced to the requirements; and

(3) Critical Design Review (CDR)—performed following the detailed design phase and ensures traceability of preliminary design products.

c. QA managers must ensure that QA tests are performed during applicable phases and in accordance with the QA test plans.

5 FAM 644 LIFE CYCLE MANAGEMENT

(TL:IM-29; 02-04-2000)

Quality assurance (QA) life cycle management is critical in executing the development process and ensuring the reliability and authenticity of the final product. Project managers must ensure that specific activities are performed throughout the life cycle of the project. Managers must also ensure that quality assurance documentation associated with each phase is accurate and complete.

5 FAM 645 PROJECT INITIATION

(TL:IM-29; 02-04-2000)

a. During project initiation the quality assurance (QA) plan is developed to ensure that all tasks are technically sound and well documented (e.g., reviews, approvals, testing, walkthroughs).

b. All use of the metadata repository must be consistent with the procedures developed for repository implementation standards.

c. More information regarding the metadata repository can be obtained from IRM/OPS/SIO/API/DA.

5 FAM 646 REQUIREMENTS ANALYSIS

(TL:IM-29; 02-04-2000)

The QA activities for this phase establish the requirements for a completed system that will function as specified. QA activities for this phase are performed for functional and non-functional requirements and the acceptance test plan. QA results should support conducting a functional requirements review and advancement to the next phase.

5 FAM 647 PRELIMINARY DESIGN

(TL:IM-29; 02-04-2000)

Perform QA during the preliminary design phase to determine that the system/subsystem specification is consistent with the requirement specifications that preceded it and that the preliminary design review has determined that the project is ready to advance to the next phase.

5 FAM 648 IMPLEMENTATION

(TL:IM-29; 02-04-2000)

This phase basically completes the system or modification effort and is tested and made available to users and operators, who are equipped with what they need for operation and maintenance. QA should be performed to ensure that the tests and results are consistent with the plans.

5 FAM 649 UNASSIGNED